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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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NOTED EXAMINER

ART UNIT

PAPER NUMBER

11

2009

DATE MAILED:

05/15/96

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This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 3-1-96 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ~~XXX~~ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

- ☒ Claims 1-16 are pending in the application.  
Of the above, claims 16-34 are withdrawn from consideration.
- ☐ Claims have been cancelled.
- ☐ Claims are allowed.
- ☒ Claims 1-16 are rejected.
- ☐ Claims are objected to.
- ☐ Claims are subject to restriction or election requirement.
- ☐ This application has been filed with informal drawings under 37 C.F.R. 1.35 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on \_\_\_\_\_ Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
- ☒ The proposed drawing correction, filed 08/18/94, has been ☐ approved; ☐ disapproved (see explanation).
- ☒ Acknowledgement is made of the claim or priority under 35 U.S.C. 116. The certified copy has ☒ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_ filed on \_\_\_\_\_
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 450 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

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### **Part III DETAILED ACTION**

#### ***Election/Restriction***

1. Applicant's election with traverse of the invention elected in Paper No. 10 is acknowledged. The traversal is on the ground(s) that applicant considered that no other patentably distinct species is considered to be present by Examiner. This is not found persuasive because claims 17-34 are directed to twelfth embodiment (figure 22) of this instant application. The requirement is still deemed proper.

2. Claims 17-34 are withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected species, the requirement having been traversed in Paper No. 10.

#### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

4. The "Listed and Copies of Documents" filed on October 22, 1993 has been received and considered by Examiner; see PTO-892.

#### ***Drawings***

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5. The drawings are objected to because the spelling "auxiary" shown in figure 9 and the numbering element "8" shown in figure 5 are not correct. Correction is required.

### ***Specification***

6. The amended Abstract of the Disclosure filed on August 18, 1994 is objected to because the Abstract of the Disclosure exceeds 250 words in length and uses legal phraseology.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. Correction is required. See M.P.E.P. § 608.01(b).

7. A substitute specification is required because it is difficult to enter a long amendments in the specification and the substituted specification can reduce the number of printing errors. Applicant should not provide the claims since the claims have been entered. The specification filed must be accompanied with a statement the it contains no new matter and a marked-up

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copy of the original specification showing additions and deletions.

8. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

10. Claims 1-16 are rejected under 35 U.S.C. § 103 as being unpatentable over Takeda et al (U.S Patent No.5,151,805; hereinafter simply referred to as Takeda).

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As to claim 1, Takeda (figures 1 and 5) discloses a matrix panel display apparatus including a plural signal lines (16a-16z) and plural scanning lines (15a-15z). Takeda teaches a picture element (7) disposed near intersection point of signal line and scanning line including picture electrode and counter electrode (two electrodes disposed between liquid crystal material). Takeda teaches a transistor (3) for applying image signals from the signal line (element 16 of figure 5 or element 2 of figure 1) and transistor (3) being controlled in response to scanning signals received on a scanning line (element 15 of figure 5 or element 1 of figure 1).

Takeda teaches means for generating auxiliary signals (modulation signal  $V_e$ ) for increasing the effective voltages of the image signals and for applying the auxiliary signals (modulation signal  $V_e$ ) to the picture elements (7) while each of transistor (3) is in non-conductive state (off state); see column 7, lines 47-50 and line 63 through column 8, line 11 and column 10, lines 65-67. It would have been obvious to one of ordinary skill in the art that the picture element (7) of Takeda is not selected when the transistor (3) is non-conductive state since the picture element is on or off determined by the signal applied to the transistor via data signal and scanning signal. Thus, when the transistor of Takeda is off, there are no voltage signal

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applied to the scanning wire and signal wire. This implies that the pixel elements is not selected.

As to claim 2, this claim differs from claim 1 only in that the limitation "applying the auxiliary signals to the picture element electrodes" is recited. This limitations reads on the modulation signal (Ve) connected to point A of the pixel element 7 as shown in figure 1 of Takeda.

As to claim 3, this claim differs from claim 1 in that the limitation "applying the auxiliary signals to the counter electrodes" is recited. This limitation reads on the modulation circuit (26) of Takeda connected to opposite electrode or counter electrode as shown in figure 11.

As to claims 15 and 16, these claims differs from claim 1 in that claims 15-16 are method wherein claim 1 is apparatus. Thus, the method claims 15-16 are analyzed as previously discussed with respect to the apparatus claim 1.

As to claims 4-5, Takeda clearly teaches the auxiliary signal operating in response to the image signal and provided in a scanning circuit.

As to claim 6, the claimed "the picture elements are in non-selected state" is clearly suggested by Takeda as analyzed with respect to claim 1.

As to claim 7, Takeda clearly shows variable amplitude auxiliary signal (positive Ve and negative Ve).

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As to claim 8, Takeda teaches auxiliary signals being independent of the image signals (modulation circuit of Takeda does not connect to image signal driving circuit).

As to claim 9, liquid crystal is clearly taught by Takeda.

As to claim 10, the claimed "the time average of the auxiliary signal nearly equals to zero" reads on the time period between positive modulation signal  $V_e$  and negative modulation signal  $V_e$  of Takeda.

As to claims 12-13, auxiliary signal generating circuit and auxiliary signals information generation means reads on the modulation circuits (13) and (14) of Takeda; see figure 5.

As to claim 14, Takeda clearly teaches TFT.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Katakura is cited to teach compensation pulse applied to scanning signal and data signal.

Iemoto is cited to teach the switching element in off state during the gate off period.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

*C.N*  
C. Nguyen  
May 09, 1996

*Chan Nguyen*  
**CHANH NGUYEN**  
**PATENT EXAMINER**  
**ART UNIT 2609**